

**W. Dean Baker**

December 1, 2006

BY HAND DELIVERY

Kevin J. Martin  
Chairman  
Federal Communications Commission  
445 12th Street, SW  
Washington, D.C. 20554

Re: Reply Comments  
ET Docket No. 06-135 & RM-11271

Dear Chairman Martin:

I want to offer my support the Alfred Mann Foundation's ("AMF") request that the Commission adopt service rules and allocate up to 20 MHz of spectrum to accommodate new wireless wideband microstimulator devices on a secondary basis. Since I retired from my career as an executive in the aerospace and defense industry, I have been involved in efforts to facilitate the transition of research from universities into commercially viable medical devices in a timely and cost-effective way. I was the Founding Director of the AMI Institute for Biomedical Engineering at the University of Southern California. I am on the board of an advisory group assisting the University of Washington, in Seattle, in establishing a means of commercializing health-care research. I have also served on the board of directors of small, privately held medical device companies. Many of the opportunities that I have seen to create new medical devices for alleviating a number of medical conditions involve the use of neurostimulators implanted in the human body. These devices have significant potential for improving human health and quality of life, but they require at least one-way, and sometimes two-way, communication through human tissue using very low power. In addition, as the technology has advanced, the bandwidth required for those transmissions has increased.

The establishment of a service allocation is vital to the development of a new generation of wireless wideband medical devices designed to restore sensation and function to paralyzed limbs and organs. These devices offer a safer, less invasive, and more effective treatment option than is available with existing equipment.

I understand that the Commission's rules currently do not provide any spectrum to permit operation of new wireless wideband microstimulator devices. Although the Commission has allocated some spectrum for medical telemetry operations and for medical implant communications services, this spectrum is not suitable for wideband medical implant devices that require larger bandwidths to perform more complex functions. Without adequate spectrum

and service rules to support the operation of these innovative devices, millions of Americans may be deprived of a safe and effective medical treatment for their debilitating health conditions.

The Commission's notice of inquiry issued in the above-referenced proceeding is an important first step toward adopting the necessary rules to encourage deployment of the next generation of wireless wideband microstimulator devices. I urge the Commission to continue its efforts in this area by expeditiously granting AMF's request for commencement of a separate rulemaking.

Sincerely,

A handwritten signature in dark ink, appearing to read "W. Dean Baker". The signature is fluid and cursive, with the first name "W." and last name "Baker" clearly distinguishable.

W. Dean Baker, PhD

cc: Marlene H. Dortch  
FCC Secretary